



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/042,813	01/09/2002	Ashwin Gumaste	064731.0250	7683
5073	7590	12/28/2004	EXAMINER	
BAKER BOTTS L.L.P. 2001 ROSS AVENUE SUITE 600 DALLAS, TX 75201-2980			CURS, NATHAN M	
			ART UNIT	PAPER NUMBER
			2633	

DATE MAILED: 12/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/042,813	GUMASTE, ASHWIN	
	Examiner	Art Unit	
	Nathan Curs	2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 09 January 2002.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1,2,7-9 and 14-19 is/are rejected.
- 7) Claim(s) 3-6,10-13 and 20 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 09 January 2002 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All
 - b) Some *
 - c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 2, 7-9 and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Milton et al. (US Patent Application Publication No. 2003/0215238).

Regarding claims 1 and 8, Milton et al. disclose a communication network comprising a plurality of sub-networks, each sub-network comprising: four nodes each having two input ports and two output ports (fig. 8, four of node elements 4-8, and for each node, two input ports and two outputs ports from each node's ring and add/drop I/O); a first one of the nodes having the input ports and one of the output ports coupled to other ones of the nodes in the sub-network (fig. 8, e.g. element 4, two ring inputs and one ring output coupled to other nodes via elements 2 and 3 – paragraphs 0040 and 0058), and wherein the other output port of the first node couples to another one of the sub-networks (fig. 8, e.g. element 4, one drop connection and paragraphs 0008, 0040 and 0058); a second one of the nodes having the output ports and one of the input ports coupled to other ones of the nodes in the sub-network (fig. 8, e.g. element 5, two ring outputs and one ring input coupled to other nodes via elements 2 and 3), and wherein the other input port of the second node couples to another one of the sub-networks (fig. 8, e.g. element 5, one add connection); a third one of the nodes having the output ports and one of the input ports

coupled to other ones of the nodes in the sub-network (fig. 8, e.g. element 6, two ring outputs and one ring input coupled to other nodes via elements 2 and 3), and wherein the other input port of the third node couples to another one of the sub-networks (fig. 8, e.g. element 6, one add connection); and a fourth one of the nodes having the input ports and one of the output ports coupled to other ones of the nodes in the sub-network (fig. 8, e.g. element 7, two ring inputs and one ring output coupled to other nodes via elements 2 and 3), and wherein the other output port of the fourth node couples to another one of the sub-networks (fig. 8, e.g. element 7, one drop connection).

Regarding claim 2 and 9, Milton et al. disclose the network of claims 1 and 8, respectively, wherein, within each sub-network: one of the output ports of the first node couples to one of the input ports of the fourth node (fig. 8, element 4 connected to element 7 via a wavelength band – paragraph 0058); one of the output ports of the second node couples to one of the input ports of the first node (fig. 8, element 5 connected to element 4 via a wavelength band – supported by paragraphs 0040 and 0058) and the other of the output ports of the second node couples to one of the input ports of the fourth node (fig. 8, element 5 connected to element 7 via a wavelength band – supported by paragraphs 0040 and 0058); one of the output ports of the third node couples to one of the input ports of the first node (fig. 8, element 6 connected to element 4 via a wavelength band) and the other of the output ports of the third node couples to one of the input ports of the second node (fig. 8, element 6 connected to element 5 via a wavelength band); and one of the output ports of the fourth node couples to one of the input ports of the second node (fig. 6, element 7 connected to element 5 via a wavelength band – supported by paragraphs 0040 and 0058).

Regarding claims 7 and 14, Milton et al. disclose the network of claims 1 and 8, respectively, wherein, within each sub-network, each of the nodes further comprises an

Art Unit: 2633

add/drop module operable to: couple to add/drop lines and route communications from the input ports of the node to an add/drop line and route communications from an add/drop line to the output ports of the node (fig. 3, elements 10 and 11 and paragraph 0042).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bala et al. (US Patent No. 6075631).

Regarding claim 15, Bala et al. disclose a sub-network of an optical communication network, the sub-network comprising: a first node (fig. 1, element 12sub4), a second node (fig. 1, element 12sub3), a third node (fig. 1, element 12sub2), and a fourth node (fig. 1, element 12sub1) interconnected to form a first unidirectional communication ring with direct communications links from the fourth node to the third node, the third node to the second node, the second node to the first node, and the first node to the fourth node (fig. 1, elements 14sub1, 14sub5, 14sub3, 14sub6 and col. 1, line 58 to col. 2, line 7); and the third node further connected to the first node to form a third unidirectional communication ring with direct communications links from the third node to the first node, the first node to the fourth node, and the fourth node to the third node (fig. 1, elements 14sub2, 14sub6 and 14sub1). Bala et al. disclose unidirectional direct communications links from the fourth node to the third node, the third node to the second node, and the second node to the third node (fig. 1, elements 14sub1,

Art Unit: 2633

14sub5 and 14sub4), but do not disclose a direct communication link from the second node to the fourth node. However, it would have been obvious to one of ordinary skill in the art at the time of the invention that using a direct communication link from the second node to the fourth node in addition to link from the second node to third node, would reduce the total number of unidirectional links required for any one switch node (fig. 1, elements 16subN) to complete a communication ring between itself and any other switch node.

Regarding claim 16, Bala et al. disclose the sub-network of claim 15, wherein the direct communications links from one node to another node are formed by coupling an output port of the one node to an input port of the other node (fig. 1, elements 14subN).

Regarding claim 17, Bala et al. disclose the sub-network of claim 15, but do not disclose that the first node is further connected to the third node to form a fourth unidirectional communication ring with direct communications links from the first node to the third node, the third node to the second node, and the second node to the first node; and the fourth node is further connected to the first node to form a fifth unidirectional communication ring with direct communications links from the fourth node to the second node, the second node to the first node, and the first node to the fourth node. However, it would have been obvious to one of ordinary skill in the art at the time of the invention that using a direct communication link from the first node to the third node and a direct communication link from the fourth node to the first node, to further reduce the total number of unidirectional links required for any one switch node (fig. 1, elements 16subN) to complete a communication ring between itself and any other switch node.

Regarding claim 18, Bala et al. disclose the sub-network of claim 15, wherein: an output port of the first node couples to an input port of a node in another sub-network (fig. 1, elements 18sub5 and 16sub5); an input port of the second node couples to an output port of a node in

another sub-network (fig. 1, elements 16sub3 and 20sub3), an input port of the third node couples to an output port of a node in another sub-network (fig. 1, elements 16sub1 and 20sub1); and an output port of the fourth node couples to an input port of a node in another sub-network (fig. 1, elements 18sub1 and 16sub1).

Regarding claim 19, Bala et al. disclose the sub-network of claim 15, wherein: an output port of the first node couples to an input port of a node in a second sub-network (fig. 1, elements 18sub5 and 16sub5); an input port of the fourth node couples to an output port of a node in the second sub-network (fig. 1, elements 16sub5 and 20sub5), an input port of the third node couples to an output port of a node in a third sub-network (fig. 1, elements 16sub1 and 20sub1); and an output port of the fourth node couples to an input port of a node in the third sub-network (fig. 1, elements 18sub1 and 16sub1). The applicant claims that an input port of the second node couples to an output port of a node in the second sub-network instead of claiming that input port of the fourth node couples to an output of a node in the second sub-network; However, in claim 18, the applicant claims that the first through fourth nodes generally couple to nodes in another sub-network. Claim 18 indicates that the coupling of specific nodes to specific additional sub-networks is not critical to the invention. Absent criticality, the limitations of coupling specific nodes to specific additional sub-networks in Claim 19 indicate obvious engineering design choice.

Allowable Subject Matter

5. Claims 3-6, 10-13 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- US Patent Application Publication No. 2002/0027877 – Discloses a packet-based data network with two-input/two-output nodes configured for enabling traffic to survive a node failure (see figs. 4A, 5A and 5B).

7. Any inquiry concerning this communication from the examiner should be directed to N. Curs whose telephone number is (571) 272-3028. The examiner can normally be reached M-F (from 9 AM to 5 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan, can be reached at (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2600.

M. R. Sedighian
M. R. SEDIGHIAN
PRIMARY EXAMINER